

### AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently Amended) A method for ~~[[the]] thermal treatment of~~ treating granular solids in a fluidized bed ~~(3, 3a)~~ which is located in a fluidized-bed reactor ~~(1, 1a, 38)~~, ~~wherein comprising feeding~~ microwave radiation ~~is fed~~ into the fluidized-bed reactor ~~(1, 1a, 38)~~ through at least one wave guide ~~(5, 46)~~, ~~characterized in that~~ and feeding a gas stream is fed into the fluidized-bed reactor ~~(1, 1a, 38)~~ through the at least one ~~same~~ wave guide ~~(5, 46)~~.

2. (Currently Amended) The method as claimed in claim 1, ~~characterized in that wherein~~ the gas stream introduced through the at least one wave guide ~~(5, 46)~~ contains gases which react with the fluidized bed ~~(3, 3a)~~.

3. (Currently Amended) The method as claimed in claim 1 ~~or 2~~, ~~characterized in that wherein~~ the gas stream introduced through the at least one wave guide ~~(5, 46)~~ is additionally utilized for a fluidization of the fluidized bed ~~(3, 3a)~~.

4. (Currently Amended) The method as claimed in ~~any of the preceding claims~~, ~~characterized in that~~ claim 1, wherein heat is additionally supplied to the fluidized bed ~~(3, 3a)~~ through the introduced gas stream.

5. (Currently Amended) The method as claimed in ~~any of the preceding claims~~, ~~characterized in that~~ claim 1, wherein the fluidized bed ~~(3, 3a)~~ is cooled by the introduced gas stream.

6. (Currently Amended) The method as claimed in ~~any of the preceding claims~~, ~~characterized in that~~ claim 1, wherein the fluidized bed ~~(3, 3a)~~ is part of a stationary and/or circulating fluidized bed.

7. (Currently Amended) The method as claimed in ~~any of the preceding claims~~, ~~characterized in that~~ claim 1, wherein the reactor comprises at least two fluidized-bed reactors ~~(1, 1a, 41a to d)~~, which are separated from each other by weirs or

partitions ~~(19, 21, 40)~~ such that solids can move as a moving bed from one fluidized-bed reactor ~~(1, 41a to c)~~ into an adjacent fluidized-bed reactor ~~(1a, 41b to d)~~.

8. (Currently Amended) The method as claimed in claim 7, ~~characterized in that wherein~~ the operating conditions, ~~in particular temperature, composition of the fluidizing gas, energy input and/or fluidization rate,~~ can be specified differently for each fluidized-bed reactor ~~(1, 1a, 41a to d)~~.

9. (Currently Amended) The method as claimed in ~~any of the preceding claims, characterized in that~~ claim 1, wherein by means of the gas stream introduced into the at least one wave guide ~~(5, 46)~~ solid deposits in the at least one wave guide ~~(5, 46)~~ are avoided.

10. (Currently Amended) The method as claimed in ~~any of the preceding claims, characterized in that~~ claim 1, wherein the ~~used~~ frequency of the microwave radiation ~~lies is~~ between 300 MHz and 30 GHz, ~~preferably at the frequencies 435 MHz, 915 MHz and 2.45 GHz.~~

11. (Currently Amended) The method as claimed in ~~any of the preceding claims, characterized in that~~ claim 1, wherein the temperatures in the fluidized bed ~~(3, 3a) lie are~~ between 300°C and 1200°C.

12. (Currently Amended) The method as claimed in ~~any of the preceding claims, characterized in that~~ claim 1, wherein the Particle-Froude-Number  $Fr_p$  in the at least one wave guide ~~(5, 46)~~ is 0.1 to 100, ~~preferably 2 to 30.~~

13. (Currently Amended) A plant for the thermal treatment of granular solids in a fluidized bed ~~(3, 3a)~~, in particular for performing the method as claimed ~~in any of claims 1 to 12,~~ claim 1, comprising a fluidized-bed reactor ~~(1, 1a, 38)~~, a microwave source (7) disposed outside the fluidized-bed reactor ~~(1, 1a, 38)~~ and ~~[[a]]~~ at least one wave guide ~~(5, 46)~~ for feeding the microwave radiation into the fluidized-bed reactor (1), ~~characterized in that wherein~~ a gas supply conduit (6) is connected to the at least one wave guide ~~(5, 46)~~ for feeding gas into the fluidized-bed reactor ~~(1, 1a, 38)~~.

14. (Currently Amended) The plant as claimed in claim 13, ~~characterized in that wherein~~ the at least one wave guide ~~(5)~~ has a rectangular or round cross-section,

whose dimensions are adapted ~~in particular~~ to the used frequency of the microwave radiation.

15. (Currently Amended) The plant as claimed in claim 13 ~~or 14, characterized in that~~ wherein the at least one wave guide (5, ~~46~~) has a length of 0.1 m to 10 m.

16. (New) The method as claimed in claim 8, wherein the operating conditions that can be specified differently for each fluidized-bed reactor are temperature, composition of the fluidized gas, energy input or fluidization rate.

17. (New) The method as claimed in claim 10, wherein the frequency of the microwave radiation is at 435 MHz, 915 MHz or 2.45 GHz.

18. (New) The method as claimed in claim 12, wherein the Particle-Froude-Number  $Fr_p$  in the at least one wave guide is from 2 to 30.